

wherein the separating element is of a dielectric material for galvanically separating at least the outer conductors of the first and second coaxial lines; and

wherein the socket and the plug couple the first end and the second ends for transmitting microwave signals of a wavelength  $\lambda$  between the first and second coaxial lines.

30. (New) The coaxial line plug-in connection according to claim 29, further comprising:

a coupling zone;

wherein the plug has a radially exterior lateral wall face;

wherein the socket has a radially interior lateral wall face; and

wherein, when the first end and the second end are inserted in the coaxial line plug-in connection, the radially exterior lateral wall face and radially interior lateral wall face lie opposite in the coupling zone and are spaced apart by the separating element. ?

31. (New) The coaxial line plug-in connection according to claim 29, wherein the separating element is arranged in the socket.

32. (New) The coaxial line plug-in connection according to claim 29, wherein the separating element consists of at least one material selected from the group consisting of PTFE, ceramics and glass.

33. (New) The coaxial line plug-in connection according to claim 30, wherein the separating element is arranged ring-shaped in the coupling zone between the exterior lateral wall face of the plug and the interior lateral wall face of the socket.

34. (New) The coaxial line plug-in connection according to claim 33, wherein the ring-shaped separating element has a minimum wall thickness of 0.5 mm.

35. (New) The coaxial line plug-in connection according to claim 30,  
 wherein the coupling zone has an axial direction;  
 wherein the coupling zone receives the separating element; and  
 wherein the coupling zone has a length of  $\lambda/4$  in the axial direction.

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36. (New) A coaxial line plug-in connection for coupling a first end of a first coaxial line and a second end of a second coaxial line, wherein each of the first and second coaxial lines has an inner conductor and an outer conductor and wherein the outer conductors of the first and second coaxial lines surround the inner conductors of the first and second coaxial lines, the coaxial line plug-in connection comprising:

- a socket;
- a plug; and
- a separating element;
- wherein the plug is comprised of one of the first and second ends;
- wherein the separating element is of a dielectric material for galvanically separating at least the outer conductors of the first and second coaxial lines; and
- wherein the socket and the plug couple the first end and the second ends for transmitting microwave signals of a wavelength  $\lambda$  between the first and second coaxial lines.

37. (New) The coaxial line plug-in connection according to claim 36, further comprising

- a coupling zone;
- wherein the plug has a radially exterior lateral wall face comprised of the outer conductor, beyond which protrudes the inner conductor in a pin-shape;
- wherein the socket has a radially interior lateral wall face; and
- wherein, in an inserted state, the radially exterior lateral wall face and radially interior lateral wall face lie opposite each other in the coupling zone spaced apart by the separating element.

38. (New) The coaxial line plug-in connection according to claim 36, wherein the separating element is arranged in the socket.

39. (New) The coaxial line plug-in connection according to claim 36, wherein the separating element consists of at least one material selected from the group consisting of PTFE, ceramics and glass.

40. (New) The coaxial line plug-in connection according to claim 36, further comprising:  
 a fastening flange which is attached to the plug;  
 wherein an inserted state of the socket and the plug is ensured by means of the  
 fastening flanged attached to the plug.
41. (New) The coaxial line plug-in connection according to claim 37,  
 wherein a further dielectric material is arranged ring-shaped in the coupling zone  
 between the exterior lateral wall face of the plug and the interior lateral wall face of the  
 socket.
42. (New) The coaxial line plug-in connection according to claim 41,  
 wherein the further ring-shaped dielectric material has a minimum wall thickness  
 of 0.5 mm.
43. (New) The coaxial line plug-in connection according to claim 37,  
 wherein the coupling zone has an axial direction and receives the separating element;  
 and  
 wherein the coupling zone has an optimum length of  $\lambda/4$  in the axial direction.
44. (New) A coaxial line plug-in connection for coupling a first end of a first coaxial line and  
 a second end of a second coaxial line, wherein each of the first and second coaxial lines has  
 an inner conductor and an outer conductor and wherein the outer conductors of the first and  
 second coaxial lines surround the inner conductors of the first and second coaxial lines, the  
 coaxial line plug-in connection comprising:  
 a socket;  
 a plug; and  
 at least one separating element;  
 wherein the plug is comprised of one of the first and second ends;  
 wherein the at least one separating element is of a dielectric material for galvanically  
 separating the inner conductors and the outer conductors of the first and second coaxial  
 lines; and  
 wherein the socket and the plug couple the first end and the second ends for

transmitting microwave signals of a wavelength  $\lambda$  between the first and second coaxial lines.

45. (New) The coaxial line plug-in connection according to claim 44, further comprising:  
 a first and a second coupling zone;  
 wherein the at least one separating element comprises a first separating element and a second separating element;  
 wherein the plug has a radially exterior lateral wall face comprised of a first outer conductor of the outer conductors of the first and second coaxial lines;  
 wherein a first inner conductor of the inner conductors of the first and second coaxial lines protrudes beyond the first outer conductor in a pin-shape;  
 wherein the socket has a first radially interior lateral wall face and a second radially interior lateral wall face;  
 wherein the radially exterior lateral wall face of the plug and the first radially interior lateral wall face of the socket, in an inserted state, lie opposite each other spaced apart by the first separating element in the first coupling zone, whereto follows the second coupling zone in which the first inner conductor lies opposite the second interior lateral wall face of the socket spaced apart by the second separating element.
46. (New) The coaxial line plug-in connection according to claim 44, wherein the at least one separating element is arranged in the socket.
47. (New) The coaxial line plug-in connection according to claim 44, wherein the at least one separating element consists of at least one material selected from the group consisting of PTFE, ceramics and glass.
48. (New) The coaxial line plug-in connection according to claim 44, further comprising  
 a fastening flange;  
 wherein the fastening flange is attached to the plug; and  
 wherein in an inserted state of the socket and the plug is ensured by means of the fastening flange attached to the plug.

49. (New) The coaxial line plug-in connection according to claim 45, wherein the first and second separating elements are each arranged ring-shaped.
50. (New) The coaxial line plug-in connection according to claim 45, wherein the pin-shaped inner conductor is surrounded by a third separating element.
51. (New) The coaxial line plug-in connection according to claim 49, wherein the first and second separating elements have a minimum wall thickness of 0.5 mm.
52. (New) The coaxial line plug-in connection according to claim 45,  
wherein the first and second coupling zones have first and second axial directions;  
wherein the first and second coupling zones receive the at least one coupling element;  
and  
wherein the first and second coupling zones each have an optimum length of  $\lambda/4$  in the first and second axial directions.
53. (New) A socket for coupling two coaxial lines each comprised of an inner conductor and an outer conductor surrounding the inner conductor, and which are suited for transmitting microwave signals of the wavelength  $\lambda$ , wherein a first coaxial line of the two coaxial lines can be plugged into the socket, the socket comprising:  
at least one separating element which is arranged in the socket;  
wherein the socket is comprised of a dielectric material; and  
wherein a galvanic separation of the outer and inner conductors is effected by the at least one separating element.
54. (New) The socket according to claim 53, wherein the socket is directly attached to a waveguide for centrally coupling the microwave signals into the waveguide.
55. (New) A plug comprised of an outer conductor and an inner conductor protruding beyond the outer conductor in a pin-shape, for coupling two coaxial lines each comprised of an inner conductor and an outer conductor surrounding the inner conductor, and which are suited for transmitting microwave signals of a wavelength  $\lambda$ , the pin-shaped inner conductor